

REMARKS

Claim Rejections

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Carroll et al. (U.S. 6,082,969).

Drawings

It is noted that the Examiner has accepted the drawings as originally filed with this application.

New Claims

By this Amendment, Applicant has canceled claim 1 and has added new claim 2 to this application. It is believed that the new claim specifically sets forth each element of Applicant's invention in full compliance with 35 U.S.C. § 112, and define subject matter that is patentably distinguishable over the cited prior art.

The new claim is directed toward a mix flow fan comprising: a hub (2) having: an outer rim (23) being a beveled surface; a flat surface (22) located on a first end of the outer rim; and a hollow space (21) located on a second end of the outer rim, the outer rim slopes outwardly from the flat surface to the hollow surface, the flat surface having a diameter that is smaller than a diameter of the hollow surface; a plurality of blades (3) equally spaced around an exterior of the bevel surface, each of the plurality of blades having bent surfaces (31) and a bent end (32) connected to the outer rim and extending from the first end of the outer rim to the second end of the outer rim; and a plurality of cambered channels (33) formed between adjacent blades of the plurality of blades, wherein an area ratio of air inlet to air outlet is between 1.9 and 2.3.

The cited reference to Carroll et al. teaches a cooling fan having a hub portion (3), a shroud portion (5), and a plurality of blades connected therebetween. The fan blades are located below line OO that is spaced apart from the outwardly extending portion. In the present invention the blades extend to the flat portion, which is different from blade location taught by Carroll et al.

Carroll et al. do not teach each of the plurality of blades having a bent end (32) connected to the outer rim and extending from the first end of the outer rim to the second end of the outer rim; nor do Carroll et al. teach an area ratio of air inlet to air outlet is between 1.9 and 2.3.

It is submitted that Carroll et al. do not disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Thus, it is not believed that Carroll et al. renders obvious Applicant's new claim under 35 U.S.C. § 103.

Summary

In view of the foregoing amendments and remarks, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

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By:

Bruce H. Troxell
Bruce H. Troxell
Reg. No. 26,592

TROXELL LAW OFFICE PLLC
5205 Leesburg Pike, Suite 1404
Falls Church, Virginia 22041
Telephone: 703 575-2711
Telefax: 703 575-2707